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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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| 09/393,998 | 09/08/99 | CULVER | C IMM1P060.RE |

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EXAMINER

CHOW, D

| ART UNIT | PAPER NUMBER |
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2675

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DATE MAILED:

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/393,998

Applicant(s)

Culver

Examiner
Dennis-Doon Chow

Group Art Unit
2675



☒ Responsive to communication(s) filed on Sep 8, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-73 is/are pending in the application

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-73 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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1. The reissue oath/declaration filed with this application is defective (see 37 CFR 1.175 and MPEP § 1414) because of the following:

a. May not adequately identify at least one error as per CFR 1.175(a)(1). An exact copying of the new claim does not meet the requirement. See MPEP 1414 ("it is not sufficient to merely reproduce the claims with brackets and underlining and state that such will identify the error").

B. No statement that "all errors being corrected ...arose without deceptive intent" See 37 CFR 1.175 (a)(2).

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-14 and 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hara (5,379,663).

Hara discloses an apparatus for generating control signals , comprising: a support (14 Fig. 1); an arm member (12A, Fig. 1) disposed within the support, wherein the arm member being moveable in a path within the support (Fig. 1); contact member slidable mounted on the arm member, wherein the contact member bing slidable along the arm member (col. 3, lines 21-29); a

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first, second and third sensors; a switch; a first and second guide means for facilitating the movement of the contact member along the arm member (col. 3 , lines 21-23; Fig. 5); and the contact member having a concave surface so that a human thumb may matingly situate on the contact member (Fig. 5).

The arm member of the apparatus are obviously moved in a arcuate path because the arm member are rotatably mounted within the support.

4. Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hara as applied to claims 1-14 and 19-23 above, and further in view of Rosenberg et al. (5,576,727).

Hara does not disclose the use of feedback means.

Rosenberg, in the same input field, discloses an input apparatus comprising feedback means for generating feedback signal.

It would have been obvious to one of ordinary skill in the art to use Rosenberg's feedback means in Hara's invention. This would have been obvious because it allows the user to have a better control of the apparatus when the apparatus is in use.

5. Claims 24-27, 32-33 and 36-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soma (5,293,158) in view of Engel et al. (5,781,172) and Gillick et al (5,530,455).

Soma discloses a small device for positioning a cursor displayed on a display device, comprising: a support housing; a user manipulatable member (10) engagable and movable by a

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user in two dimensions relative to the support housing; wherein the two dimensions are provided substantially in a single plane; and a first and second sensors coupled to the manipulatable member and sensing movement of the member in the two dimensions.

Soma does not disclose the use of feedback means.

Engel, in the same input field, discloses an input device comprising feedback means, wherein the feedback means comprising at least one motor for implementing a brake as well as an accelerator (col. 3, lines 30-33).

Therefore, it would have been obvious to one of ordinary skill in the art to use Engel's feedback means in Soma's invention. This would have been obvious because the feedback means controls the speed of the cursor.

Soma does not disclose triggering a trigger sensor by moving the manipulatable member orthogonally to the two dimensions.

Gillick, in the same input field, discloses an input device comprising a trigger sensor. The trigger sensor being triggered by moving a manipulatable member downward.

It would have been obvious to one of ordinary skill in the art to use Gillick's concept in Soma's invention. This would have been obvious because it allows the user to activate a trigger sensor without remove his/her finger from the manipulatable member.

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6. Claims 28-30 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soma as applied to claims 24-27, 32-33 and 36-45 above, and further in view of Mikan (4,825,157).

Soma does not disclose the manipulatable member is coupled to an arm member having rotary motion about a pivot point to provide motion in one of the two dimensions, and coupled to a centering spring return that return to a center position.

Mikan discloses an input device comprising a manipulatable member, wherein the manipulatable member is coupled to an arm member having rotary motion about a pivot point to provide motion in one of the two dimensions, and coupled to a centering spring return that return to a center position.

It would have been obvious to one of ordinary skill in the art to use Mikan's concept in Soma's invention because Mikan teaches an alternative way of constructing the device which provides the same input function.

7. Claims 46-51, are 53-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Armstrong (5,589,828) in view of Engel et al. and Gillick et al.

Armstrong discloses a small force feedback device for positioning a cursor displayed on a display device, comprising: a support housing; a user manipulatable member engagable and movable by a user in two dimensions relative to the support housing; wherein the two dimensions

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having a linear and rotary degree of freedoms; and a first and second sensors coupled to the manipulatable member and sensing movement of the member in the two dimensions.

Armstrong does not explicitly disclose a braking means.

Engel, in the same input field, disclose a force feedback input device comprising a braking means and accelerating means for control the speed of a cursor.

Therefore, it would have been obvious to one of ordinary skill in the art to use Engel's concept in Armstrong's invention because of the same control reason as taught by Engel.

Armstrong does not disclose triggering a trigger sensor by moving the manipulatable member orthogonally to the two dimensions.

Gillick, in the same input field, discloses an input device comprising a trigger sensor. The trigger sensor being triggered by moving a manipulatable member downward.

It would have been obvious to one of ordinary skill in the art to use Gillick's concept in Armstrong's invention. This would have been obvious because it allows the user to activate a trigger sensor without remove his/her finger from the manipulatable member.

8. Claims 58 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soma Engel et al.

Soma discloses a small device for positioning a cursor displayed on a display device, comprising: a support housing; a user manipulatable member (10) engagable and movable by a user in two dimensions relative to the support housing; wherein the two dimensions are provided

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substantially in a single plane; and a first and second sensors coupled to the manipulatable member and sensing movement of the member in the two dimensions.

Soma does not disclose the use of feedback means.

Engel, in the same input field, discloses an input device comprising feedback means, wherein the feedback means comprising at least one motor for implementing a brake as well as an accelerator (col. 3, lines 30-33).

Therefore, it would have been obvious to one of ordinary skill in the art to use Engel's feedback means in Soma's invention. This would have been obvious because the feedback means controls the speed of the cursor.

9. Claim 59 is rejected under 35 U.S.C. 103(a) as being unpatentable over Soma and Engel et al. as applied to claims 58 and 60 above, and further in view of Gillick et al.

Soma does not disclose triggering a trigger sensor by moving the manipulatable member orthogonally to the two dimensions.

Gillick, in the same input field, discloses an input device comprising a trigger sensor. The trigger sensor being triggered by moving a manipulatable member downward.

It would have been obvious to one of ordinary skill in the art to use Gillick's concept in Soma's invention. This would have been obvious because it allows the user to activate a trigger sensor without remove his/her finger from the manipulatable member.

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10. Claims 61-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soma and Engel et al. as applied to claims 58 and 60 above, and further in view of Armstrong.

Soma does not disclose one of the degrees of freedom is a rotary degree of freedom and another is a linear degree of freedom

Armstrong discloses a small input device comprising means for generating multiple degrees of freedom. One of the multiple degrees of freedom is a rotary degree of freedom and another is a linear degree of freedom.

It would have been obvious to one of ordinary skill in the art to use Armstrong's concept in Soma's invention. This would have been obvious because it allows the small device to generating multiple degrees of freedom.

11. Claims 63 and 67-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Armstrong in view of Gillick et al.

Armstrong discloses a small force feedback device for positioning a cursor displayed on a display device, comprising: a support housing; a user manipulatable member engagable and movable by a user in two dimensions relative to the support housing; wherein the two dimensions having a linear and rotary degree of freedoms; a first and second sensors coupled to the manipulatable member and sensing movement of the member in the two dimensions; and a spring return mechanism; wherein the device can be used in a navigation system

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Armstrong does not disclose triggering a trigger sensor by moving the manipulatable member orthogonally to the two dimensions.

Gillick, in the same input field, discloses an input device comprising a trigger sensor. The trigger sensor being triggered by moving a manipulatable member downward.

It would have been obvious to one of ordinary skill in the art to use Gillick's concept in Armstrong's invention. This would have been obvious because it allows the user to activate a trigger sensor without remove his/her finger from the manipulatable member.

12. Claim 73 is rejected under 35 U.S.C. 103(a) as being unpatentable over Armstrong in view of Gillick as applied to claims 63 and 67-72 above, and further in view of Engel et al..

Armstrong does not explicitly disclose a braking means.

Engel, in the same input field, disclose a force feedback input device comprising a braking means and accelerating means for control the speed of a cursor.

Therefore, it would have been obvious to one of ordinary skill in the art to use Engel's concept in Armstrong's invention because of the same control reason as taught by Engel.

13. Claims 31, 35, 52 and 64-66 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


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14 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis-Doon Chow whose telephone number is (703) 305-4398.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

D. Chow

March 26, 2675


DENNIS-DOON CHOW
PRIMARY EXAMINER